

What is claimed is:

1. A mover assembly that adjusts a position or shape of an object
2 along a first axis, the mover assembly comprising:
a motor including a motor output that moves; and
4 a coupling assembly including a stage that couples the motor output to the
object and a stage guide that guides the motion of the stage along the first axis.
- 2 2. The mover assembly of claim 1 wherein the motor output is moved
2 along the first axis and about the first axis and wherein the stage guide is a linear
bearing that allows for motion of the stage along the first axis and inhibits motion
4 of the stage about the first, about a second and third axes, along the second axis
and along the third axis.
- 2 3. The mover assembly of claim 1 wherein the motor output moves in a
2 step-like fashion.
- 2 4. The mover assembly of claim 1 wherein the mover includes a
2 piezoelectric element that causes rotation of the motor output.
- 2 5. The mover assembly of claim 4 wherein the motor includes a pair of
2 opposed jaw elements that engage the motor output and the piezoelectric element
moves the jaw elements relative to each other.
- 2 6. The mover assembly of claim 1 further comprising a measurement
2 system that provides information regarding the movement of the stage.
- 2 7. The mover assembly of claim 6 wherein the measurement system
2 includes a first component that is secured to and moves with the stage.
- 2 8. A precision apparatus including an object and the mover assembly
2 of claim 1.
- 2 9. A mover assembly that adjusts a position or shape of an object
2 along a first axis, the mover assembly comprising:

a motor including a motor output that moves; and
4 a coupling assembly including a stage that moves with the motor output, a
stage guide that guides the motion of the stage along the first axis, and a
6 measurement system that provides information regarding the movement of the
stage.

2 10. The mover assembly of claim 9 wherein the motor output is moved
2 along the first axis and about the first axis and wherein the stage guide is a linear
bearing that allows for motion of the stage along the first axis and inhibits motion
4 of the stage about the first, about a second and third axes, along the second axis
and along the third axis.

2 11. The mover assembly of claim 9 wherein the motor output moves in a
step-like fashion.

2 12. The mover assembly of claim 9 wherein the mover includes a
piezoelectric element that causes rotation of the motor output.

2 13. The mover assembly of claim 12 wherein the motor includes a pair
of opposed jaw elements that engage the motor output and the piezoelectric
element moves the jaw elements relative to each other.

2 14. The mover assembly of claim 9 wherein the measurement system
includes a first component that is secured to and moves with the stage.

2 15. A precision apparatus including an object and the mover assembly
of claim 9.

2 16. A method for moving or positioning an object, the method
comprising the steps of:
providing a motor including a motor output that is moved along a first axis;
4 coupling the motor output to the object with a stage; and
guiding the motion of the stage along the first axis with a stage guide.

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17. The method of claim 16 wherein the step of guiding includes
2 allowing for motion of the stage along the first axis and inhibiting motion of the
stage about the first axis, about a second and a third axes, along the second axis
4 and along the third axis.

18. The method of claim 16 further comprising the step of providing
2 information regarding the movement of the stage with a measurement system.

19. The method of claim 18 wherein the step of providing information
2 includes the step of coupling a first component of the measurement system to the
stage so that the first component moves with the stage.